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31. (Amended) The telecommunication system according to claim 17, wherein at least one of said redundancies is a 1:N redundancy.

32. (Amended) The telecommunication system according to claim 31, wherein said 1:N redundancy is a 1:1 redundancy.

33. (Amended) The telecommunication system according to claim 17, wherein at least one of said redundancies is a 1+1 redundancy.

REMARKS

The present Amendment revises the specification and claims to conform to United States patent practice, before examination of the present PCT application in the United States National Examination Phase. Pursuant to 37 CFR 1.125 (b), applicants have concurrently submitted a substitute specification, excluding the claims, and provided a marked-up copy. All of the changes are editorial and applicant believes no new matter is added thereby. The amendment, addition, and/or cancellation of claims is not intended to be a surrender of any of the subject matter of those claims.

Early examination on the merits is respectfully requested.

Submitted by,

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SPECIFICATION

TITLE

TELECOMMUNICATION SYSTEM AS WELL AS A METHOD FOR ~~[THE]~~ **ITS** OPERATION ~~[THEREOF~~

}BACKGROUND OF THE INVENTION

Field of the Invention

1 The invention is directed to a method for the operation of a telecommunication system ~~[according to the preamble of patent claim 1 and is also directed to a]~~ **having data traffic units and clock handling units in which at least one part can be redundantly operated as well as to an appertaining** telecommunication system ~~[according to the preamble of patent claim 15]~~. In particular, the invention is directed to a telecommunication system and a corresponding method ~~[wherein]~~ **in which** existing redundancies of data traffic units and clock handling units are advantageously established.

Description of the Related Art

2 The term telecommunication is a collective designation for all message-oriented transmission methods with variously configured services in the communication over greater distances between man-man, man-machine and machine-machine. Telecommunication is receiving a rather particular significance due to the merging of information and communication technology. Telecommunication is characterized by the transmission technology with cable transmission technology, voice and data radio, satellite technology, light waveguide technology, modems, digital searching systems and switching technology and local networks.

3 In order to enable a meaningful message exchange between two (or more) partners, a controller is required in addition to the mere transmission of messages, ~~[said]~~ **this** controller defining conventions in the form of protocols that must be adhered to for a meaningful communication. Such rules are **described in**, for example, ~~[described in]~~ the service specifications of the individual levels of the OSI reference model (Open Systems Interconnection). The OSI reference model was produced in the year 1983 by the International Standardization Organization (ISO) proceeding from the transmission of information in the sector of data processing and has become extremely wide-spread

in the meantime, in applications of communication systems as well. The OSI model merely represents principles of the message transmission and consequently only defines the logic of the information flow between subscribers. Since the OSI standard contains no definitions about the physical transmission of communication, it is manufacturer-independent but needs supplementary protocols for the realization of a communication system for a more detailed definition based on other~~[, for example proprietary,]~~ **(e.g., proprietary)** standards.

4 Fundamentally, a distinction can be made between asynchronous and synchronous communication. What is generally understood by ~~[asynchronous communication]~~**"asynchronous communication"** is the exchange of messages between a transmission entity and a reception entity that is completely decoupled in terms of time. It cannot be predicted when a transmission operation and the appertaining reception operation will be initiated.

~~[Compared thereto]~~ **5** **In contrast**, what is understood by ~~[synchronous communication]~~**"synchronous communication"** is the exchange of messages between a transmission entity and a reception entity when this exchange occurs in a fixed time grid. A transmission operation and the appertaining reception operation must thereby always be isochronically implemented.

6 Telecommunication networks are characterized by the possibility of bidirectional and multi-directional data exchange between the subscribers. This assumes that each participating subscriber can communicate with every other subscriber via the same medium. The simplest realization of this is communication of all subscribers in the base band. Due to the multitude of subscribers where active in parallel, it is mainly methods that statically allocate the available bandwidth to the subscribers in time-division multiplex that are utilized ~~[here.~~ **]in this situation.**

7 Due to the increase in use of light waveguide technology~~[,]~~ **and** the necessity of an improved intercontinental data communication and the higher performance demands, the plesiochronic digital hierarchy (PDH) that has prevailed since the 1960's is being increasingly replaced by the synchronous digital hierarchy (SDH). The International Standard SDH enacted by the International Telecommunications Union (ITU) resulted from the American Standard SONET (Synchronous Optical Network), the standard that was developed by Bellcore in the USA and approved by the Industrial Carrier Compatibility Form (ICCF) in 1984.

8 Traditional telecommunication structures are based on time-division multiplex methods (TDM, time division multiplex). ~~[Compared thereto]~~ **In contrast**, ATM (asynchronous transfer mode) only sends data when ~~[this]~~ **its transfer** is required, i.e., frames are asynchronously transmitted. The initial recommendations for ATM were published in the years 1990/91 and both the ITU as well as the ATM forum established in September 1991 have been concerned with the standardization of ATM.

9 Like other transmission methods, ATM is fundamentally based on a packet transmission technology. Similar to the OSI reference model, ATM is also vertically divided into several layers. Over and above this, a horizontal classification is undertaken according to aspects of the data exchange between users, aspects of the communication control and management aspects. A mapping of the individual ATM layers onto the layers of the OSI reference model is not possible

without further [~~ado~~] **effort** since the functions of the ATM layers are partly distributed over different OSI layers. In OSI terminology, ATM would be resident on the bit transmission level but also offers some **additional** functions of the security level [~~over and above this.~~

].

10 For the transmission, ATM only uses packets having a fixed length of 53 bytes. This rigid transmission unit is referred to as **an** ATM cell and is composed of a header that is five bytes long as well as of 48 bytes of payload information (payload). UNI cells are distinguished from NNI cells dependent on the occupancy of the bits 5-8 of the first header byte.

11 In order to enable a step-by-step introduction of the ATM transmission method both in long-distance networks as well as in local networks, ATM is not bound to a specific transmission medium. The physical layer is therefore divided into a media-dependent sub-layer (PM) and a sub-layer (TC) that is independent of the transmission medium. The transmission of a cell thereby occurs in a continuous cell stream. A fixed allocation between virtual ATM channels and time slots of the medium does not exist. On the contrary, a plurality of time slots are dynamically allocated to each virtual channel in succession dependent on the required bandwidth. The asynchronism in ATM is therefore not comprised in a time-asynchronous access onto the transmission medium but in the dynamic assigning of the bandwidth useable for a virtual channel on the basis of the plurality of required time slots.

12 The direct transmission of ATM cells is the most efficient, since an additional overhead due to the adaptation to the transmission frame of the medium is eliminated, **and** instead, the cell stream is directly transmitted bit-by-bit. The critical disadvantage of direct cell transmission is [~~thereby comprised in the~~] **that there is an** incapability with previous transmission methods in long-distance networks, since the infrastructure of these networks is based mainly on PDH and SDH systems.

13 The transmission via SDH is based on the nesting of a plurality of ATM cells in the synchronous transport modules of the SDH hierarchy. The transmission of ATM cells via SDH has [~~hitherto~~] **previously** been specified for SDH transmission rates of 155 Mbps and 622 Mbps (STM-1 and STM-4). [~~Over and above this~~] **Additionally**, the use of the STM-16 hierarchy level with 2.5 Gbps is also provided.

14 Like an ATM transmission via SDH, the use of existing of PDH networks is also provided by the ITU. An ATM transmission via PDH hierarchy levels was standardized between 1.5 Mbps and 139 Mbps.

15 In telecommunication systems, circuits that are provided for the transmission, interpretation, formatting, handling and processing of payload and supplemental data are [~~to be~~] fundamentally distinguished from circuits that serve for the reception, the generation, modification, synchronization and forwarding of clock signals.

16 Telecommunication systems **that** have [~~the~~] **a** connection to standardized transmission networks like PDH, SDH or SONET usually require a synchronization in order to achieve the necessary quality at the interface to the transmission network. Two operating modes of [~~the~~] **such** synchronization are [~~thereby~~] distinguished. In the case of an external synchronization, a clock is directly supplied to the system from an external synchronization. [~~Compared thereto~~] **In contrast,** in a

synchronization via the transmission path, the clock is acquired from the received data stream of the interface and supplied to the system as **a** synchronization source. To this end, the received data frames also include supplemental information that describe the quality of the clock signal of a collaborating party, containing this in addition to the payload information.

17 The clock quality is transmitted in timing marker bits in some interface types in plesiochronic digital hierarchy. In the case of SONET and the synchronous digital hierarchy, the quality of the clock signal is communicated in ~~[what is referred to as the SSM byte]~~ **the "SSM byte"** (synchronization status message).

18 Since the clock quality of a clock source with which the telecommunication system is synchronized can be variable and a reference clock can also drop out, at least two reference clocks that are redundant relative to one another are employed for synchronization of telecommunication systems. The drop-out of a reference clock must ~~[thereby]~~ be recognized by the telecommunication and a switch must then be automatically made to the redundant reference clock.

19 In order to assure error-free data transmission in a telecommunication system, telecommunication systems exhibit redundancies both in the data traffic as well as in the clock handling. Fundamentally, ~~[the]~~ **a** line redundancy and ~~[the]~~ **a** board redundancy must be distinguished. ~~[Given the]~~ **For** line redundancy, a line that is redundant relative to one line is established~~[. In]~~**; for** board redundancy, assemblies that are redundant relative to one another are present.

20 A distinction ~~[must be]~~ **is** made between 1+1, 1:1 and 1:N redundancies both in line redundancy as well as in board redundancy. Given 1+1 redundancy, both units that are redundant relative to one another (lines, assemblies) have the same information in ~~[the]~~ **an** error-free condition. One of ~~[the]~~ **these** units is ~~[thereby]~~ selected as **an** active ~~[units, whereas]~~ **unit, and** the other is on hand ~~[("hot standby").~~

~~]~~**in a "hot standby" mode.**

21 Given 1:1 redundancy, the two units that are redundant relative to one another carry ~~[a]~~ non-identical information in ~~[the]~~ **an** error-free condition. A determination is ~~[thereby]~~ made as to which of the redundant units transmits or~~[, respectively,]~~ processes information having a priority that is higher than the other unit. In case of error of the unit having the higher priority, the operation of the lower-priority unit is interrupted so that the transmission or~~[, respectively,]~~ processing of the more important information can be continued. Given 1:N redundancy, one low-priority unit serves N other units.

22 When a **data traffic** unit such as~~[, for example,]~~ an interface card 5~~[,]~~ **(Figure)** is newly configured, then the operator recites the redundancies that are desired in the telecommunication system. These redundancies are then established with software-controlled or hardware-controlled ~~[switch means. Over and above this]~~ **switches. Additionally**, the information about the redundancies that have been established are maintained in data banks.

23 To this end, the telecommunication system has a central data bank available to it ~~[wherein]~~ **in which** data relating to each and every individual reference clock are also maintained in addition to information about the status of individual assemblies, alarm messages about failed units, and the plurality of reference clocks. These clock-specific data comprise the specification of the interface card

from which the reference clock and the payload data are taken, the priority, the current quality, and the availability of the reference clock as well as alarm messages regarding reference clocks that have dropped out.

24 In addition to the central data bank, the telecommunication system also has decentralized (local) data banks available to it to which the individual units have access. These decentralized data banks are images of the central data bank but only contain those data that are required for the respective unit. When data in the central data bank are modified, the telecommunication system also updates the decentralized data banks.

25 Such a modification of the central data bank ensues, for example, when a peripheral processor platform (an interface card, a clock generator) or some other unit fails, the quality of a reference clock changes or a new reference clock is established.

26 In traditional telecommunication systems, the operator specifies the requested redundancy both for the data traffic as well as for the clock handling upon establishment of a **data traffic** unit such as~~[, for example,]~~ an interface card 5.

27 This has the disadvantage that settings are also possible ~~[wherein]~~ **where** only the data traffic but not the clock handling is secured due to the presence of redundant units. ~~[The case can thereby occur that, given]~~ **Given** an outage or a reduction in quality of the clock signals, a data traffic ~~[becomes]~~ **may become** faulty due to the shifting of clock frequencies even though redundancies had been established.

SUMMARY OF THE INVENTION

28 The invention is thus based on the object ~~[of specifying]~~ **providing** a method for operating a telecommunication system as well as a telecommunication system having enhanced operating dependability.

29 This object is achieved by ~~[the subject matters of patent claims 1 and 17.~~ **]a method for operating a telecommunication system that contains data traffic units and clock handling units that can comprise both lines as well as assemblies, in which at least one part can be redundantly operated, the method comprising the steps of: defining a redundancy for a defined redundancy entity, the defined redundancy entity being either at least one part of the data traffic units or at least one part of the clock handling units; establishing the defined redundancy for the defined redundancy entity; and establishing a redundancy corresponding to the defined redundancy for at least one other part which is not the defined redundancy entity.**

30 This object is also achieved by a telecommunication system, comprising: data traffic units for implementing data traffic, the data traffic units capable of comprising lines and assemblies and capable of being redundantly operated; clock handling units for clock handling, the clock handling units capable of comprising lines and assemblies and capable of being redundantly operated; a data traffic unit redundancy mechanism for establishing a redundancy of at least one part of the data traffic units; and a clock handling unit redundancy mechanism for establishing a redundancy of at least one part of the clock handling units; the

data traffic unit redundancy mechanism and the clock handling unit redundancy mechanism being connected to one another such that they enable establishing the redundancy of one of the mechanisms for establishing by transferring the redundancy of the other mechanism for establishing a redundancy.

31 Advantageous developments of the invention are ~~[the subject matters of the subclaims.]~~ as follows. The telecommunication system may be an ATM telecommunication system. One of the steps of establishing may comprise the step of writing at least one data bank which can be a central or a local data bank. The step of establishing the redundancy corresponding to the defined redundancy may comprise a step of determining the defined redundancy. The step of establishing the defined redundancy may be software-controlled. The step of establishing the redundancy corresponding to the defined redundancy may set this redundancy hardware-controlled. The inventive method may further comprise the step of selecting one of redundant data traffic units and clock handling units. The step of defining the redundancy may ensue for at least a part of the data traffic units and a redundancy corresponding thereto is established for at least a part of the clock handling units. At least one of the defined redundancies or redundancies corresponding thereto may be a board redundancy or a line redundancy. At least one of the defined redundancies or redundancies corresponding thereto may be a 1:N redundancy, which includes a 1:1 redundancy. At least one of the defined redundancies or redundancies corresponding thereto may be a 1+1 redundancy. At least one interface card may be provided which is a part of at least one part of the data traffic units, or an interface card may be provided which is a part of at least one part of the clock handling units. Finally, a clock generator may be provided which is a part of at least one part of the clock handling units. These inventive aspects are explained in greater detail below or have been described above.

~~[What is particularly achieved with the invention is]~~ 32 The invention particularly provides that, upon establishment of redundant units (lines, assemblies), redundancies relating both to the data traffic as well as to the clock handling are always established~~[. As a result thereof,]~~, resulting in avoidance of sources of error ~~[are avoided and]~~and providing an enhanced failure dependability ~~[is achieved.]~~.

~~[Further]~~ 33 Furthermore, the invention advantageously creates a method for operating a telecommunication system as well as a telecommunication system ~~[wherein]~~ in which the operator need not indicate ~~[the]~~ an associated redundancy ~~[thereof]~~ upon establishment of the reference clock~~[. This leading to]~~, resulting in a reduction of the work outlay. ~~[Over and above this]~~ Additionally, all information about established redundancies are present at the earliest possible point in time via central and decentralized data banks.

BRIEF DESCRIPTION OF THE DRAWINGS

34 Preferred exemplary embodiments of the invention are explained in below[~~. Shown are: Fig. 1 an~~] **with reference to the sole Figure.**

Fig. a block schematic diagram providing overview of clock handling units of an ATM node.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

35 The lines, interface [~~cards 5~~]**cards/data traffic units 5,** and clock generators 3, 4 **(which are a part of the clock handling units 1-4)** shown in **the** Fig. [~~1~~] can be redundantly operated. [~~Over and above this~~] **Additionally**, further clock handling units can comprise redundancies. Finally, the data traffic units and lines (which are not shown in [~~Fig. 1~~]) **the Fig.)** also comprise redundancies.

36 According to the preferred exemplary embodiment, the operator of the telecommunication system establishes a 1+1, 1:N or 1:1 redundancy of a line or of **an** assembly that serves the purpose of data traffic. This redundancy is deposited in a data bank. Subsequently, the redundancy of the data traffic is automatically determined with a software control and applied to the clock handling. To that end, a corresponding redundancy of the clock handling devices is set under hardware control. Subsequently, the redundant units (lines, assemblies) that have been set are established and one of the redundant units is selected for active operation. Queries of the local data bank will preferably ensue for this purpose.

37 The inventive method is preferably applied in an inventive telecommunication system for establishing a clock source that comprises a 1+1 line redundancy.

[~~Abstract~~] 38 **The above-described method and telecommunication system are illustrative of the principles of the present invention. Numerous modifications and adaptations will be readily apparent to those skilled in this art without departing from the spirit and scope of the present invention.**

~~[TELECOMMUNICATION SYSTEM AS WELL AS A METHOD FOR THE OPERATION THEREOF]~~

ABSTRACT

39 For protecting the data traffic, telecommunication systems comprise redundancies in assemblies or lines of data traffic units and clock handling units. When establishing units such as clock sources, the redundancy of the data traffic and of the clock handling must be separately indicated. This can lead to a situation ~~[wherein]~~ **in which** only the data traffic is redundant but not the clock handling. The invention ~~[is intended to enhance]~~ **enhances** the operational dependability of the telecommunication system. First, a redundancy is defined and established either for a part of the data traffic units or a part of the clock handling units. A redundancy corresponding to the defined redundancy is then likewise established for the other part. The inventive telecommunication system comprises ~~[means]~~ **a mechanism** for establishing a data traffic redundancy and ~~[means]~~ **a mechanism** for establishing a clock redundancy that are connected to one another.
~~[Figure 1]~~

Appendix A
Mark Ups for Claim Amendments

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1. [~~Method~~]**(Amended) A method** for operating a telecommunication system that contains data traffic units [~~(5)~~] and clock handling units [~~(1-4)~~] that can comprise both lines as well as assemblies, [~~whereby~~] **in which** at least [~~respectively~~] one part can be redundantly operated, [~~whereby the~~] **said** method [~~comprises~~] **comprising** the [~~following~~] steps **of**:

defining a redundancy [~~either for the~~] **for a defined redundancy entity, said defined redundancy entity being either** at least one part of [~~the~~] **said** data traffic [~~unit (5)~~] **units** or [~~for the~~] at least one part of [~~the~~] **said** clock handling units[~~(1-4), and~~];

establishing [~~the~~] **said** defined redundancy for [~~the at least one part for which the~~] **said defined** redundancy [~~has been defined, characterized by the step:~~] **entity; and**

establishing a redundancy corresponding to [~~the~~] **said** defined redundancy for [~~the other~~] at least one **other** part [~~for~~] which [~~the redundancy has~~] **is** not [~~been~~] **said** defined **redundancy entity.**

2. (Amended) The method[~~.~~

~~2. Method~~] according to claim 1, [~~characterized in that the~~] **wherein said** telecommunication system is an ATM telecommunication system.

3. [~~Method~~]**(Amended) The method** according to claim 1 [~~or 2, characterized in that~~], **wherein** one of [~~the~~] **said** steps of establishing [~~contains a~~] **comprises the** step of writing at least one data bank[~~,~~] which can be a central or a local data bank.

4. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 3, characterized in that the~~] **claim 1, wherein said** step of establishing [~~a~~] **said** redundancy corresponding to the defined redundancy [~~contains~~] **comprises** a step of determining [~~the~~] **said** defined redundancy.

5. [~~Method~~]**(Amended) The method** according to claim 4, [~~characterized in that the~~] **wherein said** step of [~~determining the~~] **establishing said** defined redundancy is software-controlled.

6. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 5, characterized in that the~~] **claim 1 wherein said** step of establishing [~~the~~] **said** redundancy corresponding to [~~the~~] **said** defined redundancy sets this redundancy hardware-controlled.

7. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 6, characterized in that the method~~] **claim 1,** further [~~comprises a~~] **comprising the** step of selecting one of [~~the~~] redundant data traffic units and clock handling units.

8. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 7, characterized in that the~~] **claim 1, wherein said** step of defining [~~the~~] **said** redundancy ensues for at least a part of [~~the~~] **said** data traffic units and [~~the~~] **a** redundancy corresponding thereto is established for at least a part of [~~the~~] **said** clock handling units.

9. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 8, characterized in that~~] **claim 1, wherein** at least one of [~~the~~] **said** defined redundancies or redundancies corresponding thereto is a board redundancy.

10. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 9, characterized in that~~] **claim 1, wherein** at least one of [~~the~~] **said** defined redundancies or redundancies corresponding thereto is a line redundancy.

11. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 10, characterized in that~~] **claim 1, wherein** at least one of [~~the~~] **said** defined redundancies or redundancies corresponding thereto is a 1:N redundancy.

12. [~~Method~~]**(Amended) The method** according to claim 11, [~~characterized in that the~~] **wherein said** 1:N redundancy is a 1:1 redundancy.

13. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 12, characterized in that~~] **claim 1, wherein** at least one of [~~the~~] **said** defined redundancies or redundancies corresponding thereto is a 1+1 redundancy.

14. [~~Method~~]**(Amended) The method** according to [~~one of the claims 1 through 13, characterized in that~~] **claim 1, further comprising the step of providing at least one interface card which is a part of** at least one part of [~~the~~] **said** data traffic units [~~comprises~~]**.**

15. (Amended) The method according to claim 1, further comprising the step of providing at least one interface card **which is a part of** [~~(5).~~

~~15. Method according to one of the claims 1 through 14, characterized in that the~~] at least one part of [~~the~~] **said** clock handling units [~~comprises at least one interface card (5).~~]**.**

[16. Method] **16. (Amended) The method** according to [one of the claims 1 through 15, characterized in that the]**claim 1, further comprising the step of providing a clock generator which is a part of** at least one part of [the] **said** clock handling units [comprises a clock generator (1-4).].

[17. Telecommunication] **17. (Amended) A telecommunication** system, comprising:

data traffic units [(5) for the implementation of a] **for implementing** data traffic, [whereby the] **said** data traffic units [can comprise] **capable of comprising** lines and assemblies and [can be] **capable of being** redundantly operated[,];

clock handling units [(1-4)] for clock handling, [whereby the] **said** clock handling units [can comprise] **capable of comprising** lines and assemblies and [can be] **capable of being** redundantly operated[,];

[means] **a data traffic unit redundancy mechanism** for establishing a redundancy of at least one part of [the] **said** data traffic units[(5), and]**; and**

[means] **a clock handling unit redundancy mechanism** for establishing a redundancy of at least one part of [the] **said** clock handling units[(1-4),];

[characterized in that the means for establishing are] **said data traffic unit redundancy mechanism and said clock handling unit redundancy mechanism being** connected to one another such that [the] **they** enable [the] establishing [of] the redundancy of one of [the means] **said mechanisms** for establishing by transferring the redundancy of the other [means] **mechanism** for establishing **a redundancy.**

18. (Amended) The telecommunication[.

18. Telecommunication] system according to claim 17, [characterized in that the] **wherein said** data traffic units comprise at least one interface card[(5).].

[~~19. Telecommunication~~] **19. (Amended) The telecommunication** system according to claim 17 [~~or 18, characterized in that the~~]**, wherein said** clock handling units comprise at least one interface card[~~(5).~~]**.**

[~~20. Telecommunication~~] **20. (Amended) The telecommunication system** according to [~~one of the claims 17 through 19, characterized in that the~~] **claim 17, wherein said** telecommunication system is an ATM telecommunication system.

21. [~~Telecommunication~~]**(Amended) The telecommunication** system according to claim 20, [~~characterized in that the~~] **wherein said** clock handling units comprise at least one clock generator[~~(1-4).~~]**.**

[~~22. Telecommunication~~] **22. (Amended) The telecommunication system** according to [~~one of the claims 17 through 21, characterized in that~~] **claim 17, wherein** at least one of [~~the means~~] **said mechanisms** for establishing [~~is fashioned such that it has~~] **a redundancy is configured to** access [~~to~~] a central data bank.

23. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 22, characterized in that~~] **claim 17, wherein** at least one of [~~the means~~] **said mechanisms** for establishing [~~is fashioned such that it has~~] **a redundancy is configured to** access [~~to~~] a local data bank.

24. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 23, characterized in that~~] **claim 17, wherein** at least one of [~~the means~~] **said mechanisms** for establishing **a redundancy** comprises [~~means~~] **a mechanism** for determining a redundancy.

25. [~~Telecommunication~~]**(Amended) The telecommunication** system according to claim 24, [~~characterized in that the means~~] **wherein at least one of said mechanisms** for establishing [~~are~~] **a redundancy is** software-controlled.

26. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 25, characterized in that the means~~] **claim 17, wherein at least one of said mechanisms** for establishing **a redundancy** are fashioned such that they set [~~the~~] **said** redundancies hardware-controlled.

27. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 26, characterized in that the means~~] **claim 17, wherein at least one of said mechanisms** for establishing [~~comprise means~~] **a redundancy further comprises a selector** for selecting one of [~~the~~] **said** redundant units.

28. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 27, characterized in that the means for establishing the redundancy of at least one part of the~~] **claim 17, wherein said** clock handling [~~units establish~~] **unit redundancy mechanism establishes** a redundancy corresponding to [~~the~~] **a** redundancy of the data traffic units.

29. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 28, characterized in that~~] **claim 17, wherein** at least one of [~~the~~] **said** redundancies is a board redundancy.

30. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 29, characterized in that~~] **claim 17, wherein** at least one of [~~the~~] **said** redundancies is a line redundancy.

31. [~~Telecommunication~~]**(Amended) The telecommunication** system according to [~~one of the claims 17 through 30, characterized in that~~] **claim 17, wherein** at least one of [~~the~~] **said** redundancies is a 1:N redundancy.

32. ~~[Telecommunication]~~**(Amended) The telecommunication** system according to claim 31, ~~[characterized in that the]~~ **wherein said** 1:N redundancy is a 1:1 redundancy.

33. ~~[Telecommunication]~~**(Amended) The telecommunication** system according to ~~[one of the claims 17 through 32, characterized in that]~~ **claim 17, wherein** at least one of ~~[the]~~ **said** redundancies is a 1+1 redundancy.